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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,133	09/10/2004	Tetsutaro Inoue	0020-5295PUS1	2676
2292	7590	10/03/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			RESAN, STEVAN A	
			ART UNIT	PAPER NUMBER
			1773	
DATE MAILED: 10/03/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/507,133

Applicant(s)

INOUE ET AL.

Examiner

Stevan A. Resan

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/10/04 & 7/14/05</u> . | 6) <input type="checkbox"/> Other: ____ |

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the word "type" renders the claim indefinite because the addition of the word type to an otherwise definite expression extends the scope of the expression so as to render it indefinite. See MPEP § 2173.05(b).Ex parte Copenhaver, 109 USPQ 118 (Bd. App. 1955).

Also claim 1 specifies that the lower non-magnetic layer and the magnetic layer are "formed in this order". However since an intermediate layer is provided just under the upper magnetic layer the claim is deemed confusing since the specification teaches forming the non-magnetic, intermediate and then magnetic layer in order on the substrate.

Claims 2-7 are rejected for depending from a claim rejected under 35 USC 112.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichorst US 5726001 in view of Kolb et al. US 6733906.

Eichorst discloses a magnetic tape comprising a lower non-magnetic layer containing non-magnetic powder and a binder, an intermediate layer consisting essentially of a binder of an organic polymer soluble in an organic solvent (as in claim 3) and an upper magnetic layer formed on a substrate in that order. (See examples)

Eichorst does not teach the thickness limits as claimed, however it would have been obvious to one of ordinary skill in the art to minimize the layer thicknesses in order to maximize the length of tape that can be wound on a given diameter reel.

Eichorst does not teach about the fluctuation at the interface between the upper magnetic layer and the intermediate layer (as in claim 2). However Kolb et al is cited for teaching the regulation of rheological properties of coating solutions to minimize fluctuations . (See Col 1 lines 60-65; Col 2 lines 3-6,13-18,53-55;Col 3 lines 54-60; Col 4 lines 10-14;Col 5 lines 61-65; Col 6 lines 13-17;Col 10 lines 8-12,57-61; Col 13 lines 38-44;Examples,Claims 61-63.

Therefore it would have been obvious to one of ordinary skill in the art to minimize the fluctuation of the layers to minimize modulation of the magnetic signal.

It would also have been obvious to one of ordinary skill in the art to minimize the surface roughness of the magnetic layer a(as in claim 6) to reduce noise and therefore raise S/N ratio as known in the art, and to maximize the residual magnetic flux density (as in claim 7) in order to increase the reproducing output as known in the art and set forth in the background section of the present specification.

5. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al JP 05-290353 in view of Kolb et al. US 6733906.

Shibata et al disclose a magnetic tape comprising a lower non-magnetic layer containing non-magnetic powder and a binder, an intermediate layer consisting essentially of a binder of an organic polymer soluble in an organic solvent (as in claim 3). and an upper magnetic layer formed on a substrate in that order. (See examples).

Shibata et al do not teach the thickness limits as claimed, however it would have been obvious to one of ordinary skill in the art to minimize the layer thicknesses in order to maximize the length of tape that can be wound on a given diameter reel.

Shibata et al do not teach about the fluctuation at the interface between the upper magnetic layer and the intermediate layer (as in claim 2). However Kolb et al is cited for teaching the regulation of rheological properties of coating solutions to minimize fluctuations . (See Col 1 lines 60-65; Col 2 lines 3-6,13-18,53-55;Col 3 lines 54-60; Col 4 lines 10-14;Col 5 lines 61-65; Col 6 lines 13-17;Col 10 lines 8-12,57-61; Col 13 lines 38-44;Examples,Claims 61-63.

Therefore it would have been obvious to one of ordinary skill in the art to minimize the fluctuation of the layers to minimize modulation of the magnetic signal.

It would also have been obvious to one of ordinary skill in the art to minimize the surface roughness of the magnetic layer a(as in claim 6) to reduce noise and therefore raise S/N ratio as known in the art, and to maximize the residual magnetic flux density (as in claim 7) in order to increase the reproducing output as known in the art and set forth in the background section of the present specification.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stevan A. Resan whose telephone number is 571-272-1513. The examiner can normally be reached on Tues-Thurs from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



STEVAN A. RESAN
PRIMARY EXAMINER